CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/W.No.14/NCM/GSB-I/GR/2016-17

Date : 09.08.2016

GRADATION FOR GSB(Coarse Graded-1)
IS : 2720 (Part - 4)

Client : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

Agency : **Mr. N.C. Manjunatha,** Contractor, Bangalore.

Name of work : Improvements to cross roads and drains at Arunodaya Hospital Mallasandra opposite BBMP office in Bagalagunte Ward No.14, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/369/2016-17 Dated: 06.08.2016

Date of Testing : 09.08.2016

Sample Source : Mix Plant Bangalore. **Oven Dry Wt (gm) :** 6690

TABLE – 1

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specified Limits
75	-	-	-	100	100
26.5	1990	1990	29.75	70.25	55-75
4.75	2850	4840	72.35	27.65	10-30
0.075	1400	6240	93.27	6.73	<10
PAN	450				
Total	6690				

Remarks: Satisfies MORTH Specifications as per Table 400-2, Grading I

Note:

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Basaveshwaranagar,
Bangalore-560079.

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ಟಿ.ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
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Date : 09.08.2016

ATTERBERG LIMITS TEST FOR GSB
MORTH TABLE-400-01

Client : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

Agency : **Mr. N.C. Manjunatha,** Contractor, Bangalore.

Name of Work : Improvements to cross roads and drains at Arunodaya Hospital Mallasandra opposite BBMP office in Bagalagunte Ward No.14, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/369/2016-17 Dated: 06.08.2016

Date of Testing : 09.08.2016

Sample Source : GSB, Mix Plant

Sl. No.	Particulars	Test Results	Standards as per Specifications
1	Liquid Limit, %	24.00	25.0% Maximum.
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

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Job No.: CTCE/BBMP/W.No.14/NCM/WMM/Gradation/2016-17

16.08.2016

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

Agency : **Mr. N.C. Manjunatha,** Contractor, Bangalore.

Name of Work : Improvements to cross roads and drains at Arunodaya Hospital Mallasandra opposite BBMP office in Bagalagunte Ward No.14, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/369/2016-17 Dated: 06.08.2016

Date of Testing : 16.08.2016

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **7765**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	155	155	2.0	98.0	95-100
22.4	2450	2605	33.5	66.5	60-80
11.2	1210	3815	49.1	50.9	40-60
4.75	1080	4895	63.0	37.0	25-40
2.36	990	5885	75.8	24.2	15-30
0.600	850	6735	86.7	13.3	8-22
0.075	680	7415	95.5	4.5	0-8

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Job No.: CTCE/BBMP/W.No.14/NCM/WMM/AIV/2016-17

16.08.2016

Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
Agency	**Mr. N.C. Manjunatha,** Contractor, Bangalore.
Name of the Work	Improvements to cross roads and drains at Arunodaya Hospital Mallasandra opposite BBMP office in Bagalagunte Ward No.14, BBMP, Bangalore.
Reference	BBMP/DZ/AEE/TDSD/PR/369/2016-17 Dated: 06.08.2016
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	16.08.2016

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	380	382	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	79	80	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	301	302	
4	Aggregate Impact value = percent fines	20.79	20.94	
	100* (W_2/W_1)%			20.87

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

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